

Clinical Trial Protocol

Iranian Registry of Clinical Trials

29 Jun 2026

The Effect of 8 Weeks Endurance and Combined Training on Serum Levels of Fetuin-A, Transforming growth factor beta)TGF- β (and Metabolic Syndrome in Overweight and Obese Women

Protocol summary

Study aim

The purpose of this study is to investigate the Effect of 8 Weeks Endurance and Combined Training on Serum Levels of Fetuin-A, Transforming growth factor beta (TGF- β) and Metabolic Syndrome in Overweight and Obese Women.

Design

A clinical trial with a control group, parallel, randomized, with a predicted sample size of 45 and Phase 3 trial

Settings and conduct

This study will be conducted on obese and overweight women living in the city of Zabol, Iran. The duration of the research is 8 weeks and the participants are divided into three groups randomly. The interventional factor including endurance and resistance training is considered for this study.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Healthy People, Inactive, Non-Smoking, Not using diet and medicines to lose weight, Body mass index greater than 25 Exclusion criteria: Heart disease, Respiratory problems, Joint pains, Use of Metabolic Drugs

Intervention groups

First intervention group: endurance training; aerobic exercise activity has been selected as interventionists of this group. Second intervention group: Combined exercise; Endurance and resistance training (combined) have been selected as interventionists of this group. Control group: This group will not do any regular physical activity.

Main outcome variables

Study of Aspartate Transaminase changes; Study of Alanine Aminotransferase Changes; Study of Alkaline Phosphatase Changes

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180612040073N5**
Registration date: **2019-05-06, 1398/02/16**
Registration timing: **retrospective**

Last update: **2019-05-06, 1398/02/16**

Update count: **0**

Registration date

2019-05-06, 1398/02/16

Registrant information

Name

Majid Vahidian-Rezazadeh

Name of organization / entity

University of Sistan and Baluchestan

Country

Iran (Islamic Republic of)

Phone

+98 54 3341 6107

Email address

vahidian@ped.usb.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-10-23, 1397/08/01

Expected recruitment end date

2018-11-01, 1397/08/10

Actual recruitment start date

2018-10-23, 1397/08/01

Actual recruitment end date

2018-11-05, 1397/08/14

Trial completion date

2019-01-20, 1397/10/30

Scientific title

The Effect of 8 Weeks Endurance and Combined Training on Serum Levels of Fetuin-A, Transforming growth factor beta (TGF- β) and Metabolic Syndrome in Overweight and Obese Women

Public title

Effect of 8 Endurance and Combined Training on Fetuin-A, TGF- β and Metabolic Syndrome

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Healthy People Inactive Non-Smoking Not Using Diet And Medicines To Lose Weight Body mass index greater than 25

Exclusion criteria:

Heart disease Respiratory problems Joint pains Use of Metabolic Drugs

Age

From **30 years** old to **45 years** old

Gender

Female

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **45**

Actual sample size reached: **45**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization method: Simple Random unit: Individual

Randomization Tool: Sealed Envelope

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Zahedan University of Medical Sciences

Street address

Ali Ebn Abitaleb Hospital, Salamat Blvd., Persian Gulf Highway

City

Zahedan

Province

Sistan-va-Balouchestan

Postal code

9816743111

Approval date

2019-03-10, 1397/12/19

Ethics committee reference number

IR.ZAUMS.REC.1397.514

Health conditions studied

1

Description of health condition studied

Overweight and Obesity

ICD-10 code

E66

ICD-10 code description

Overweight and obesity

Primary outcomes

1

Description

Fetuin A Changes

Timepoint

Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol

Method of measurement

"Fetuin A" test kit

2

Description

Transforming growth factor beta

Timepoint

Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol

Method of measurement

"Transforming growth factor beta" test kit

3

Description

Triglyceride

Timepoint

Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting mode

Method of measurement

" Triglyceride" test kit

4

Description

Low-density lipoprotein (LDL)

Timepoint

Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting

mode

Method of measurement

"LDL" test kit

5

Description

High-density lipoprotein (HDL)

Timepoint

Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting mode

Method of measurement

"HDL" test kit

6

Description

Cholesterol

Timepoint

Blood sampling at the beginning of the study (24 hours before the intervention) and 24 hours after the last session of the research protocol. 12 hours in fasting mode

Method of measurement

"Cholesterol" test kit

7

Description

Subcutaneous fat

Timepoint

24 hours before the intervention and 24 hours after the last session of the research protocol

Method of measurement

Using the Caliper

8

Description

Body mass index

Timepoint

24 hours before the intervention and 24 hours after the last session of the research protocol

Method of measurement

Based on the formula "Weight divided by height squared"

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Endurance Exercise

Category

Treatment - Other

2

Description

Intervention group: Combined exercises (Endurance and Resistance)

Category

Treatment - Other

3

Description

Control group:

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

University of Sistan and Baluchestan

Full name of responsible person

Majid Vahidian-Rezazadeh

Street address

Department of Sport Sciences, University of Sistan and Baluchestan, Daneshgah Blvd.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

University of Sistan and Baluchestan

Full name of responsible person

Dr Dor Mohammad Kordi

Street address

Deputy of Research, Central Organization, University of Sistan and Baluchestan, Daneshgah Blvd.

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Phone

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Email

dor_kordi@yahoo.com

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

University of Sistan and Baluchestan

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Academic

Person responsible for general inquiries**Contact****Name of organization / entity**

University of Sistan and Baluchestan

Full name of responsible person

Majid Vahidian-Rezazadeh

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Exercise Physiology

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

University of Sistan and Baluchestan

Full name of responsible person

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Position

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available